LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Original)

A method for mounting a light emitting element by suctioning a first part serving as a light emitting element having an optic axis toward the horizontal direction at the lower end portion of a suction head, and mounting the first part while aligning the first part with a second part held on a stage, the method comprising the steps of:

preparing a first optical system disposed above said suction head;

preparing a second optical system disposed below said stage such that the optic axis thereof and the first optical system generally face each other; and

preparing a third optical system disposed such that the optic axis thereof and the first optical system are generally orthogonal;

inserting the suction head between the first optical system and the second optical system, capturing a head reference mark, which is appended to the suction head and can be recognized from above, using the first optical system, capturing the first part suctioned at the suction head using the second optical system, making the first part emit light, and recognizing the optic axis thereof using the third optical system;

inserting the stage between the first optical system and the second optical system, capturing the second part held on the stage using the first optical system, and also capturing a stage reference mark, which is appended to the stage and can be recognized from below, using the second optical system;

calculating the relative position between the first part and the suction head using the image information from said first optical system, second optical system, and third optical system, and the relative position between the second part and the stage;

moving said suction head and stage to a mounting position,recognizing said head reference mark and stage reference mark in the mounting position using said first and second optical systems, and subjecting at least one of the suction head and the stage to position correction using said position information and said relative position information such that the positions of the first part and the second part have a predetermined relation; and

mounting the first part and the second part following said position correction.

Claim 2 (Currently Amended)

The method for mounting a light emitting element according to ~~Claim~~ claim 1, wherein said step of preparing the first optical system and the second optical system includes a step of measuring the amount of optic-axis deviation between the first optical system and the second optical system by inserting a single calibration mark, which can be recognized from both above and below, between the first optical system and the second optical system, and capturing this calibration mark using the first optical system and the second optical system.

Claim 3 (Currently Amended)

The method for mounting a light emitting element according to ~~Claim~~ claim 1, wherein said step of preparing the first optical system and the third optical system includes a step of measuring the amount of optic-axis deviation between the first optical system and the third optical system by inserting a calibration mark of which the relative spatial relationships from above and from the horizontal direction are known between the first optical system and the third optical system, and capturing this calibration mark using the first optical system and the third optical system.

Claim 4 (Currently Amended)

The method for mounting a light emitting element according to ~~Claim~~ claim 2 or claim 3, wherein said calibration mark is a mark provided on said suction head or said stage.

Claim 5 (Currently Amended)

The method for mounting a light emitting element according to claim 1, wherein in said step of making the first part emit light, and recognizing the optic axis thereof using the third optical system, an emitting light state of the first part is measured, and the first part is discarded as a defective article without proceeding to the subsequent steps in the event that the emitting light state thereof deviates from a reference value.

Claim 6 (Currently Amended)

The method for mounting a light emitting element according to claim 1, wherein said first optical system, second optical system, and third optical system are held at fixed spatial relationships throughout the step of capturing said head reference mark and first part, the step of capturing said second part and stage reference mark, the step of subjecting at least one of said suction head and stage to position correction, and the step of mounting the first part and the second part.

Claim 7 (Currently Amended)

The method for mounting a light emitting element according to claim 1, wherein said step of position correction between the suction head and the stage at the mounting position includes the steps of:

recognizing said head reference mark and stage reference mark using said first and second optical systems, and subjecting the suction head and the stage to temporal tacking using said relative position information such that the positions of the first part and the second part are in a predetermined relation; and

consecutively capturing the head reference mark and the stage reference mark using the first and second optical systems while heating one or both of said suction head and stage for bonding, and subjecting the suction head and the stage to relative position correction so as to maintain the relative spatial relationships of said temporal tacking step.

Claim 8 (Currently Amended)

The method for mounting a light emitting element according to claim 1, wherein said step of mounting the first part and the second part measures the relative distance in the vertical direction between the first part and the second part using the third optical system, and mounts the first part and the second part while correcting a gap therebetween.

Claims 9-13 (Canceled)